

## SECTION I.

BEFORE I enter upon the enquiry which is to form the subject of this Section, viz. "A comparative statement of the produce of the Mines, during a double term of fifteen years, before and since the Revolution of 1810, with the proportion borne by the Produce to the Exports of the precious metals, during the same period;" it is necessary to premise, that it is almost impossible, from the want of authentic data, to institute any exact comparison between the quantity of Gold and Silver raised in any two years of these two periods, or to fix the proportion borne by it, in each year, to the Exports.

The utmost that can now be attempted, is, to form a reasonable estimate of the total Produce, and total Exports, of each fifteen years, without pretending to arrive at an exact analysis, the materials for which no longer exist. During the Civil War, the Archives, not only of the College of Mines, (to which Humboldt had access, and by which the produce of each separate District might have been ascertained,) but

of almost all the Mining Deputations,\* were destroyed; and, after the most diligent enquiries, both in the Capital, and the Interior, I have been able to obtain but few, and scattered remnants of those valuable documents, which had accumulated in the great mining Provinces, during the three preceding centuries. Even the registers of the sums paid into the *Cajas Provinciales*, (Provincial Treasuries) as the King's Fifth, have disappeared; and their loss is the more to be regretted as they would have furnished data, upon which the total Produce might have been easily, and correctly computed.

The Coinage, therefore, is the only standard that can now be adopted; and although this, from its nature, cannot comprehend the whole amount of the precious metals *raised*, (some portion of which, in each year, was not converted into dollars,) yet, if about One million of dollars be added to the average of the Mint Returns, for Silver not registered at all, and registered Silver worked up into plate, (the abundance of which, in Mexico, was, at one time, proverbial,) there will not, I believe, be any reason to suppose that the actual Produce of the country, during the fifteen years which preceded the Revolution, much exceeded the estimate thus formed.

With regard to the Second Period, which commences with the Civil War, the difficulty of forming

\* *Vide* Section II. for an explanation of this term.



any correct calculation of the annual produce of the country, is much increased.

The returns of the Mint of Mexico are of no avail, as, during the years 1810, 1811 and 1812, Mints were established at Guānajuatō, Zācātēcās, Guādālājārā and Dūrāngō, with which the Mint of the Capital had no connexion, and over which it exercised no control.

Nor do the returns of all these establishments combined, lead to a more satisfactory result; for there are many obvious reasons why they cannot be regarded as affording a correct estimate of the Produce:

1st. Because a large proportion of the Silver sent to the Mints was not Silver *then* extracted from the mines, but Plate belonging to Churches and private families, the whole of which was melted down during the Revolution, in order to supply the rapid decrease of the circulating medium.

2ndly. Because the Coinage in the Provincial Mints was so bad,\* and the quantity of base metal used as alloy so great, that even a correct account of the number of dollars struck off, would not be found to give a just idea of the quantity of Silver, which they contained.

3rdly. Because, of the large sums which passed through the hands of the Revolutionary Chiefs,

\* The dollars which have survived this period of disorder, are now only taken at a discount of from fifteen to twenty per cent.

(some of whom worked mines of considerable importance,) no account was ever given. And,

4thly. Because the gold contained in the silver, (a great abundance of which is found in the ores of some mines,) was never properly separated from it, after the communication between the Interior and the Capital was closed. None of the Departments possessed a Casa del Apartado, (in which the chemical process of separating the two metals, when combined, is performed;) and, although some portion of the gold may have been obtained by the use of quicksilver in the Ārāstrēs, (crushing mills,) whatever remained incorporated with the silver was sacrificed; and, as the amount of gold, produced annually, before the Revolution, averaged 1,100,000 dollars, (a great part of which passed through the Casa del Apartado,) this loss, in fifteen years, must have amounted to a very considerable sum.\*

These observations sufficiently prove the unavoidable inaccuracy of any estimate that can now be formed, respecting the amount of the precious metals raised from the Mines of Mexico, during the fifteen years immediately subsequent to the Revolution: but having pointed out the difficulties that

\* I have myself seen ores from Guārīsāmēy, at the Mint of Durango, which contained 2100 grains of gold to the Marc. (there are 576 grains in the ounce.) The mine of Rayas has produced ores containing 2700 grains; and 550 grains per Marc is by no means an uncommon *ley de oro* (proportion of gold) in the mine of Villalpando, at Guanajuato.



must be encountered, and the impossibility of so entirely surmounting them as to arrive at any very accurate conclusion, I shall proceed, without farther preamble, to state the results of my enquiries with regard to the Produce and Exports of each of the two periods under consideration.

By the annexed Table, (No. 1,) it appears that the registered Coinage of the Mint of Mexico, from the year 1796 to the year 1810, (inclusive,) amounted to 342,114,285 dollars; which gives an average of 22,807,619 dollars for each year.

To this I should add for Silver, (registered and unregistered), *not* coined, 1,192,381 dollars; thus giving Twenty-four millions of dollars as the whole annual average Produce of the Mines of Mexico during the fifteen years which immediately preceded the Revolution of 1810.

The registered Exportation from Veracruz, during the same period, on the account of the merchants, was, according to the Balanza General, or Annual Report of the Consulado of Veracruz,

	Dollars.
To Spain (in fifteen years)	91,340,275
To Spanish America	22,251,822
To Foreign Countries direct, in 1806-7-8, and 9	27,892,903
<b>Total</b>	<b>141,485,000</b>

The Average Commercial Exportation, therefore,

to the East, in the fifteen years, would be 9,432,333 dollars, 2 reals.\*

The Exports of the Royal Treasury (not included in the Balanza General,) are not to be ascertained by any recent document; I have, therefore, been forced to take as the basis of my present calculation, Humboldt's Table of the Exports on the King's account, to Spain, and to the Spanish Colonies, during a term of thirteen years, (from 1779 to 1791,)<sup>†</sup> which gives 108,428,677 dollars as the Total, or 8,340,667 dollars, 3 reals, as the annual average amount of each of the thirteen years.

To these, again, must be added 2,000,000, or 2,500,000 dollars, as the annual amount of illicit extraction by those engaged in the smuggling trade; most of the articles thus introduced being paid for in specie upon the spot.

The total annual Exports appear, therefore, to have been:

From Veracruz	Dollars.	Rs.
On Merchant's account	9,432,333	2
On King's account	8,340,667	3
Carried forward	17,773,000	5

\* The Average of Commercial Exports given here differs from that given in the Analysis of the Balanza General, in the last Section of the preceding Book, in as much as the calculation there embraces a term of twenty-five years; while here it only comprehends fifteen years, and ends exactly at the time when the registered commercial Exports began to decrease.

<sup>†</sup> *Vide* Essai Politique, Book V. Chapter XII. page 444, 8vo edition.



	Dollars.	Rs.
Brought forward	17,773,000	5
From Acapulco (on both)	1,500,000	
Contraband Trade	2,500,000	
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Total average value of Exports	21,773,000	5

Allowing 227,000 dollars more, on each year, for the Contraband Trade which appears to have increased in value in each successive year, although its exact amount cannot be ascertained, we shall have a total Exportation of Twenty-two millions of dollars, to set against a total Produce of Twenty-four millions; so that, during the fifteen years that preceded the Revolution, the amount of the precious metals that accumulated in Mexico would appear to have been Thirty millions of dollars.

This estimate differs materially from that given by Baron Humboldt, who did not conceive, at the time of his visit, that the annual produce of the mines exceeded twenty-three millions of dollars.

This calculation was perfectly natural in 1803, the average of the Coinage, from 1796 to that year, having only been 21,750,249 dollars;\* to which Humboldt adds 1,249,751 dollars, for silver not included in the Mint Returns.

But the Coinage from 1803 to 1810 inclusive,

\* The Mint Returns from 1796 to 1803 (inclusive,) give 174,001,998 dollars as the Total Coinage during the eight years.

averaged 24,016,182 dollars (the total amount of the dollars registered in the Mint of Mexico, in these seven years, having been 168,113,278): and this circumstance sufficiently accounts for the difference in the average produce of the whole term, as given in the *Essai Politique*, and in the present calculation.

With regard to the benefit actually derived by the country from its mineral treasures, or, in other words, the annual addition to the circulating medium, (after paying the difference between the Imports and Exports, and the remittances on the account of the Royal Treasury,) which Humboldt estimates at One million of dollars in each year, the increased Produce likewise accounts for the increase in the annual accumulation, which I have estimated at Two millions of dollars.

I have no data that will warrant me in rating the average annual Exports, during the fifteen years now under consideration, higher than I have done, viz.: Twenty-two millions of dollars; although, if we divide that term into two periods, of eight and seven years, (from 1796 to 1803, and from 1804 to 1810 inclusive,\*) we shall find the Average of the Commercial Exports to have varied from 8,561,753 dollars, to 12,105,047 dollars. In the Exports of the Royal Treasury, I do not believe that there was

\* Total Exports from 1796 to 1803, (Veracruz) 56,859,768 dollars. Total Exports from 1804 to 1810, 84,735,332 dollars.



any material change. There is, therefore, nothing in the fluctuations of the Commercial Exports to affect the calculation with regard to the Average of the whole term; while the Produce, undoubtedly, rather exceeded, than fell short of, the Twenty-four millions of dollars at which I have estimated it; 1,192,381 dollars being, in the opinion of those whom I have had occasion to consult upon the subject in Mexico, a very inadequate allowance for the Silver not included in the Mint Returns.

I cannot, therefore, estimate the annual addition to the circulating medium, before the Revolution, at a less sum than Two millions of dollars; and I am the more inclined to conceive this calculation to be correct, because the Exportation of Specie during the last fifteen years, (from 1810 to 1825,) appears so much to have exceeded the whole Produce of the Mines, that the country, had it not been for the surplus which accumulated during this season of prosperity, must have been left without a circulating medium at all.

This brings me to the second part of my enquiry, viz. the Average annual amount of the precious metals raised from 1810 to 1825, with the Exports during the same period.

I have already stated the impossibility of forming any very accurate calculation upon the last of these points, with regard to which much conjectural evidence must be admitted. As to the first, (the Produce,) although, for the reasons mentioned in

the beginning of this Section, the returns from the different Mints cannot be said to furnish a correct estimate of the Silver raised from the Mines, they, nevertheless, comprise the only authentic data that can now be obtained, and I shall, consequently, make them the basis of my calculations.

By the annexed Tables (Nos. II. to VI.) it will appear that the Coinage, from 1811 to 1825 inclusive, in the whole territory of Mexico, was as follows:—

	Dollars.
In Mexico . . . . .	111,551,082
In Guādālajāra . . . . .	4,868,760
In Dūrāngō . . . . .	6,917,652
In Zācātēcās . . . . .	30,659,518
In Chīhuāhūa . . . . .	1,216,000
Forming a sum total of . . . . .	155,213,012

from which, however, must be deducted 1,636,040 dollars, being the value of 396 *Tejos de oro* (Ingots of gold), and 4263 Ounces, (Doubloons) remitted upon the account of the first Loan by the House of Goldschmidt, and included in the Coinage of the Capital for the year 1825; and 300,000 dollars likewise received in gold, about the same time, by the United Mexican Company.

The remainder (153,276,972 dollars,) will give 10,218,464 dollars 6 reals, as the annual average Produce of the fifteen years.

Yet, small as this sum is, in comparison with the



Average of the registered Coinage before the Revolution, (22,807,619 dollars) it is impossible now to ascertain the Mines, or Districts, from which it proceeded.

Without regular Returns, it is difficult to show to what extent the effects of the Revolution were felt in each; but, in those Districts where records were kept, (extracts from most of which I have been enabled to obtain), the difference between the Produce of the fifteen years, before, and after, the commencement of the Civil War, appears to have been enormous.

In Guånäjüatō, the amount of the precious metals raised, diminished from 8,852,472 Marcs of Silver and 27,810 Marcs of Gold,\* (the produce of the fifteen years preceding the Revolution†) to 2,877,213 Marcs of Silver, and 8109 Marcs of Gold; (or something less than one-third of the original amount of both,) which appears, by the annexed Table (No. VIII.) to have been the produce of the whole District from 1811 to 1825.

From Zacatecas, I have been able to obtain but partial accounts: it does not appear, however, by these, that any very great falling off took place in the early part of the Civil War, the Mines of Veta

\* The Marc of Silver may be taken at  $8\frac{1}{2}$  dollars, and that of Gold at 136 dollars; so that the produce of Guanajuato in dollars, from 1796 to 1810, was 79,028,017 dollars, and from 1811 to 1825, 25,559,009 dollars.

† Vide Table VII.

Grande, (now worked by the Bolaños Company,) having yielded, from 1796 to 1810, 1,171,328 marcs of Silver, and from 1811 to 1825, 917,097 marcs. (Table IX.) The difference, therefore, on the whole term, was only 254,231 marcs, or 2,160,963 dollars. But Zacatecas, even in the years of its greatest abundance, never produced more than Two millions of dollars annually; \* and, notwithstanding the little change which occurred at Veta Grande, from the number of other Mines, (not comprehended in that Negotiation †,) which were unworked in 1823, it may fairly be assumed that these Two millions were, latterly, reduced to One.

The Mint Returns, indeed, appear to contradict the assumption, as they give something more than Two millions of dollars, as the average Coinage of each year. But the Coinage of Zacatecas did not consist of the produce of Zacatecas alone: it comprehended a part of the produce of Sömbrërētě, and Cätörčě, with that of Pīnōs, and Rāmōs, and other small Districts of San Luis Pötōsī, the whole of which was brought to the Mint of Zacatecas, in preference to that of the Capital, with the exception

\* Humboldt gives the total produce in five years (from 1785 to 1789, at 1,264,991 marcs, which give an average of 2,048,484 dollars on each year.

† *Negotiation* is a Mexican Mining term, and signifies a number of Mines, worked as one undertaking, by an individual, or association of individuals, whose quota of expences and profits is divided into twenty-four *Barrs*, as they would be in working a single Mine.



of that portion of the Silver raised, that was conveyed to the coast in bars, without being converted into dollars at all, the general amount of which I shall have occasion, subsequently, to examine.

The average annual produce of Sombrerete, during this period, is stated, (though not upon the authority of registered returns) to have been 300,000 dollars, or about 200,000 dollars less than the ordinary produce, from the time of the great Bonanza of the Fagoaga family, (when Eleven millions of dollars were raised in eight months, from the Mine of El Pävällön alone,) up to 1810.

The registered produce of the Mining Districts of San Luis Pötösī, (the most important of which was Cätörčě) during a term of five years, before and after the Revolution, (for which alone I have been able to procure Returns,) is stated in the annexed Table, (No. X.) by which it appears that there was a decrease in the latter period of 8261 Bars of Silver, (each of 134 marcs, or 1139 dollars,) which gives a total difference of 9,409,279 dollars on the five years after 1810.

The produce of the Mines of Catorce in ten years, (from 1816 to 1825 inclusive,) according to an extract from the Registers, which has been recently transmitted to me, was 5,994,006 dollars; which, if one half of this sum, (or 2,997,003 dollars) be added for the five years not included in the Returns in my possession, will give 8,991,009 dollars, as the Total, or 599,400 dollars as the average annual pro-

duce of that District, on the whole fifteen years. Before the Revolution, Catorce was second only to Guänäjüatō in the amount of the Silver raised, the value of which was estimated by Humboldt, (in 1803) at Three millions and a half of dollars annually.

The produce of the Biscaina Vein, at Real del Monte, in seven good years before the Revolution, (from 1794 to 1801,) was Six millions of dollars, or 857,042 dollars per annum. From 1809 to 1823, it only yielded 200,000 dollars in all, or 14,285 dollars per annum.

If it were possible to obtain returns from the other Mining Districts, the disproportion between the produce before, and after, the year 1810, would be found to be equally striking.

In all, the principal Mines were abandoned, the Machinery was allowed to go to ruins, and the Silver raised was merely the gleanings of more prosperous times; the workings, (where any were attempted) being confined, almost entirely, to the upper levels.

Tasco, (which was an important military station to the South of the Capital) forms a solitary exception to this rule; for the town being constantly garrisoned by Royalist Troops, and only once taken by the Insurgents, the Tribunal de Minería undertook to work the Mines there, which formerly belonged to the famous Laborde; and did so with such success, that the produce is supposed to have averaged 400,000 dollars annually.